

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TENNESSEE  
AT KNOXVILLE

National Parks Conservation Association	)	
and the Sierra Club,	)	
	)	Civil Action No.: 3:01-CV-071
Plaintiffs,	)	(Judge Varlan)
	)	(Magistrate Judge Guyton)
v.	)	
	)	
Tennessee Valley Authority.	)	
	)	
Defendant.	)	
_____	)	

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**PLAINTIFFS' BRIEF IN OPPOSITION TO TVA'S MOTION IN LIMINE  
TO EXCLUDE THE OPINION TESTIMONY OF ROBERT H. KOPPE**

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TVA's motion *in limine* to exclude the testimony of Robert H. Koppe should be denied.

Mr. Koppe has been qualified as an expert in at least two other federal court proceedings regarding power plant expansions, and just a month ago overcame a *Daubert* challenge to his emissions increase calculations that was almost identical to the one TVA's brings here.

Pursuant to Rule 702 of the Federal Rules of Evidence,

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

First, as a utility engineer with over 30 years of experience, Mr. Koppe is clearly qualified to testify regarding the expected emissions increases at TVA's Bull Run power plant. Second,

Mr. Koppe's emissions increase calculations are precisely tailored to the legal standards in this case and thus are relevant to the determination of whether TVA's modifications at Bull Run triggered Clean Air Act prevention of significant deterioration (PSD) permitting obligations. Third, Mr. Koppe's testimony regarding emissions increases at Bull Run are based on reliable principles and methods.

A. Mr. Koppe is Qualified to Testify Regarding Projected Emissions From Power Plants.

Mr. Koppe is qualified to give his opinion regarding the expected emissions that result from the projects undertaken by TVA at Bull Run. He is an engineer with over thirty years of experience evaluating and predicting generating unit performance in the utility industry. In fact, Mr. Koppe developed the GADS system for tracking utility unit performance that is relied upon by both plaintiffs and TVA in this proceeding. *See* Koppe Report, December 28, 2007, at pp. 4, 7 {Doc. 136, Ex. 19}; Expert Report of Donald P. Houston, December 21, 2007, at 4 (Doc. 136, Ex 20) Mr. Koppe has also analyzed industry generation unit performance for the Electric Power Research Institute (EPRI), a utility industry research group, and several other utilities. In addition, he has provided expert testimony before several regulatory bodies on power plant performance. *Id.*

Mr. Koppe has also been admitted as an expert in federal court proceedings to provide the same type of emission increase information that he provides here. In *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829 (S.D. Ohio 2003), for example, the court relied on Mr. Koppe's emissions increase calculations to find Ohio Edison liable for Clean Air Act violations. According to the *Ohio Edison* court,

Finally, the Court concludes, with only a few exemptions as stated above, that the Defendant should have determined that the activities would result in significant net emissions increases, for purposes of PSD compliance. **In reaching this conclusion, the Court finds that evidence proffered through Drs. Rosen and Koppe as well as Ron Sahu provide a reasonable and credible basis from which to evaluate the issue of increase in emissions.**

*Id.* at 885 (emphasis added).

More recently, the district court in *United States v. Cinergy Corp.*, Civil Action No. 1:99-cv-1693 (S.D. Ind.), ruled on April 11, 2008 that Mr. Koppe was qualified to testify on the issue of emissions increases at coal-fired power plants:

Just like the prior motions in limine / Daubert challenges in this cause that the Court has already considered and denied, the Court finds that the parties' experts are qualified in their respective fields by reason of knowledge, education, or experience and that the assumptions and methodologies underlying their opinions have been subjected to some type of testing or verification or are premised on assumptions generally accepted within the relevant community. Further, the Court concludes that the arguments in opposition to the experts go to the credibility and the weight to be given to the testimony. Accordingly, Plaintiffs' Motion to Exclude the Expert Report and Testimony of Dr. Gary Liberson (Docket No. 1083), **Defendants' Motion to Exclude the Proposed Testimony of Robert H. Koppe** (Docket No. 1108), and Defendants' Motion to Exclude the Proposed Testimony of Dr. Richard Rosen (Docket No. 1109) **are all DENIED.**

**Exhibit A**, p.3 (emphasis added).

Because Mr. Koppe has been, and continues to be, qualified as an expert to determine emissions increases at power plants, TVA's motion to exclude his testimony should be denied.

B. Mr. Koppe's Emissions Increase Calculations are Tailored to the Legal Standard in this Case and Thus Are Relevant.

TVA claims Mr. Koppe's calculations of emissions increases are all irrelevant, TVA Brief at 11-19, because they do not "fit" the applicable legal standard. TVA's arguments are all legal in nature, and are basically a rehash of their arguments at summary judgment. Therefore,

TVA's claims that Mr. Koppe determined emissions increases based on the wrong legal standard are mistaken for the reasons set forth in Plaintiffs' motion for summary judgment and Plaintiffs' response to TVA's motion for summary judgment, and such pleadings are respectfully incorporated herein by reference.

1. Mr. Koppe's Actual Emissions Calculations

As plaintiffs explain in their summary judgment briefing, a comparison of actual emissions before the projects in question to actual emissions afterward is legally irrelevant because the entire emissions increase analysis is supposed to be prospective. *See United States v. Southern Indiana Gas and Elec. Co.*, 245 F. Supp.2d 994, 1022 n. 20 (S.D.Ind.2003) ("According to the Government, owners and operators are required-before commencing construction-to project or predict the post-project emissions rate to determine whether a permit is required. Based upon the language of the Act and its implementing regulations, the Court agrees with the Government"). Accordingly, Mr. Koppe analyzed actual-to-actual emission differences as a verification exercise. Those emissions were what they were, and he acknowledged that some of the sulfur dioxide increase after the projects was due to a change in the sulfur content of the coal. Koppe rebuttal report, February 25, 2008, p. 10. *See* Ex. 26 to Plaintiffs' Opposition to TVA's Motion for Summary Judgment (hereinafter Rebuttal Report).

C. Mr. Koppe's Emissions Increase Calculations are Based on Reliable Principles and Methods.

1. Mr. Koppe's Availability Calculations

To determine the extent to which emissions would be projected to increase after TVA's modifications to Bull Run in 1986, Mr. Koppe determined the amount of time equipment failures

prevented Bull Run from operating before that equipment was overhauled and assumed those equipment failures would not persist after the overhaul. By correcting the equipment failures that were causing Bull Run to shut down, Bull Run would operate for more hours in a year after the overhaul. By operating more, Bull Run would emit more pollution.

As Mr. Koppe summarized in his rebuttal report,

Replacing the superheater and economizer directly caused the unit to be able to operate for more hours. This directly caused the unit to operate for more hours. This directly caused the unit to emit more pollutants. This is not rocket science. It is as simple and clear and direct and obvious an example of causality as one will ever see in the world of power plant operations. These additional emissions occurred as a direct result of the projects. But for the projects the additional emissions would not have occurred.

Rebuttal Report, at 3.

That TVA takes no issue with the accuracy of Mr. Koppe's calculations is shown by the deposition testimony of TVA's expert Mr. Houston. When asked whether he had found any errors in Mr. Koppe's calculations, Mr. Houston was sufficiently unconcerned to have even checked the calculations.

Q. So the answer is you don't have an opinion about the validity of his calculations?

A. I guess so. I didn't check his calculations, so I can't say.

Houston Depo., p. 54.

TVA attempts to argue, Motion in Limine Brief at 20-21, that because Mr. Koppe has departed from a "universal" approach for projecting additional availability his testimony should be stricken. TVA's argument mischaracterizes Mr. Koppe's deposition testimony and is all other respects incorrect.

As Mr. Koppe explains in his declaration he has submitted in support of plaintiffs'

position on this motion, *see* Exhibit B, “availability” is a measure of how much time a unit is able to generate electricity. As plaintiffs explain at length their briefing related to the summary judgment motions filed in this case, essentially what plaintiffs are arguing in this case is that TVA undertook non-routine projects to increase the availability of the Bull Run plant. With this increase in availability comes increases in emissions.

In its motion, at 20, TVA asserts that Mr. Koppe’s deposition testimony shows that Mr. Koppe deviated from the universal approach for predicting availability, and that therefore, his testimony should be disallowed. As Mr. Koppe explains in his accompanying declaration, Exhibit B, Mr. Koppe did in fact use the universal approach in a way that is specifically tailored to the regulations. As Mr. Koppe explains, when utilities project what improvements in availability will result from a project, they actually make two projections. First, the utility predicts what availability will likely be if the project is performed. Next, the utility predicts what availability will likely be if the project is not performed. They determine the availability improvement, they use the difference between these two projections.

Under the regulatory scheme in place here, *see* Plaintiffs’ Brief in Support of Plaintiffs’ Motion for Summary Judgment [Doc. 136], the regulations always use actual emissions as the baseline. Thus, to calculate how much emissions are likely to increase from availability improvements, Mr. Koppe used universal techniques, the same technique he has used for over 30 years and the same technique he has used in his other expert witness appearances. Mr. Koppe compared predicted availability improvement to current availability rather than a projection of what availability would be if the project were not performed. This latter projection would actually be inconsistent with any known regulatory test for calculating emissions. This is the

“difference” discussed in Mr. Koppe’s deposition testimony.

With this background, one can see that the conclusions TVA draws from Mr. Koppe’s deposition testimony are inappropriate. TVA Brief, at 20. TVA asks “who asked you to do it in a different way.” *Id.* TVA never asks, however, how the approach Koppe used is different or why he used a different approach. Thus he never had the chance to explain that the standard industry practice for predicting **improvements** in availability does not square with the regulations or that he used standard industry practice for **predicting** future availability. Furthermore, Mr. Koppe’s response to the “who asked you” question was essentially ‘I don’t know.’ Thus, if he doesn’t know who asked him to do the analysis in a certain way, he wouldn’t remember why that particular person would have asked him to do an analysis in a certain way. TVA never asked Koppe, however, his understanding of why he was using a different approach, and that’s why the deposition transcript does not contain the answer.

## 2. Mr. Koppe’s Emission Calculation Methodology

TVA’s argument that Mr. Koppe has no experience doing emission calculations, TVA Brief at is completely disingenuous. All Mr. Koppe did to predict future emissions in this case is take the average rate that the facility emits per hour and multiply that rate figure by the increased number of hours that the facility will be available because of the projects. *See Exhibit 26 to Plaintiffs' Brief in Opposition to TVA'S Motion for Summary Judgment.* TVA’s expert never mentioned any problem with this methodology. Houston Dep. at 52-53. Expertise is necessary in order to predict availability, and Mr. Koppe’s expertise in that area is probably unparalleled.

Indeed, Mr. Koppe’s prediction of emission increases due to increased availability caused

by the projects is simple. Mr. Koppe has held constant every variable that availability changes that might impact annual emissions: emission rate, fuel type, changes in demand and so forth. Thus, “but for” an availability improvement caused by these projects, he would predict no emission increase at all. Thus, his emission calculation essentially boils down to multiplying a constant value, emission rate (as expressed in units of pollution per hour) by increased hours of availability, if any. This multiplication exercise does not require an advanced degree.

3. Mr. Koppe’s Methodology Does Not Produce Absurd Results

TVA complains that under Mr. Koppe’s methodology, TVA would trigger PSD with an availability improvement of only 8 hours per year, and TVA calls this result “absurd.” TVA’s complaint is not with Mr. Koppe’s work, but rather with the regulations. The Bull Run facility is so huge, that in the two years prior to the 1988 projects, the facility’s average emissions were 33,647 tons per year. *See* Doc. 136, Ex. 4, Response 6. *See* Doc. 136, Ex. 6, at 3. Its potential to emit is over 144,000 tons per year. *Id.* Response 15. A utility is considered a major source of air pollution if it emits 100 tons per year of pollution. Thus, the Bull Run facility exceeds the major source threshold by 1444 times. That is why any non-routine availability improvement at the plant will result in an emissions increase.

D. Plaintiffs Request a *Daubert* Hearing

Plaintiffs believe that they have submitted more than enough information to justify denial of this motion. In the event the Court still has questions regarding the reliability of Mr. Koppe, however, Plaintiffs respectfully request the scheduling of a *Daubert* hearing.



## CONCLUSION

For the foregoing reasons, TVA's Motion in Limine should be DENIED.

Respectfully submitted this 5<sup>th</sup> day of May, 2008

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# CERTIFICATE OF SERVICE

I hereby certify that on May 5, 2008, a copy of the Foregoing Plaintiffs' Brief in Opposition to TVA's Motion in Limine was filed electronically. Notice of this filing will be sent by operation of the Court's electronic filing system to all parties indicated on the electronic filing receipt. Parties may access this filing through the Court's electronic filing system.

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